

**ECONOMIC AND SOCIAL  
COUNCIL**

Distr.  
LIMITED  
E/ESCWA/EDID/2017/IG.1/5  
E/ESCWA/EDID/2016/IG.1/4(Part I)/Rev.1  
3 October 2017  
ORIGINAL: ENGLISH

**Economic and Social Commission for Western Asia (ESCWA)**

Committee on Transport and Logistics  
Eighteenth session  
Beirut, 20-21 December 2017



Item 6 of the provisional agenda

**The role of transport in the connectivity to global value chains****Summary**

The Arab region has geographic and demographic advantages that can be capitalized on to increase its participation to global value chains. Its proximity to major production hubs in Asia and Europe, and the existence of legal frameworks related to economic groupings such as the Greater Arab Free Trade Area (GAFTA), the Gulf Cooperation Council (GCC) and the Agadir Agreement, can facilitate such participation. However, transport infrastructure and services are not at the level required to enable the region's connectivity to global production competitively.

This report assesses the efficiency of transport infrastructure and services for economic transformation in the Arab region, and their suitability in enabling connectivity to global value chains, based on available international indicators. It provides recommendations to enhance the performance of the transport and trade sectors in Arab States. Representatives of member States are invited to consider this report and provide comments and suggestions thereon.

## CONTENTS

	<i>Paragraphs</i>	<i>Page</i>
Introduction .....	1-6	3
<i>Chapter</i>		
<b>I. THE ECONOMIC IMPACT OF GLOBAL VALUE CHAINS .....</b>	7-9	3
<b>II. THE ROLE OF TRANSPORT IN IMPROVING CONNECTIVITY TO GLOBAL VALUE CHAINS .....</b>	10-18	4
<b>III. TRANSPORT AND CONNECTIVITY TO GLOBAL VALUE CHAINS IN ARAB COUNTRIES .....</b>	19-29	5
A. Transport regulations .....	19-20	5
B. Transport infrastructure .....	21-22	6
C. Connectivity to international transport networks .....	23-29	7
<b>IV. TRANSPORT IN THE TRADE IN VALUE ADDED DATABASE .....</b>	30-37	9
<b>V. CONCLUSIONS AND POLICY RECOMMENDATIONS.....</b>	38-45	11

## Introduction

1. The value chain is the full range of processes involved in the design, production and distribution of a final product. It stretches from upstream activities like research and development, to downstream activities such as assembly, distribution, and marketing and after-sales services. The distinctive property of global value chains (GVCs) is that these activities are spread across several countries, often in the same region, but sometimes in different parts of the world. Each enterprise that is part of a GVC specializes in a particular task, and the lead one brings all the various tasks together through the supply of headquarter services, which coordinate all inputs of goods and services to produce the final product and get it to the consumer.
2. The fragmentation of the production of goods and services has played an important role in shifting participation in the global markets from developed countries to developing countries and lowering production costs. The development of information and communications technology has enabled producers to connect to major production operations anywhere in the world. Countries that were disadvantaged by size, location, level of development or production capacities now participate in the world economy by specializing in specific tasks or products for which they have a competitive advantage. Small and medium enterprises participate in operations that were previously limited to large and multinational enterprises.
3. In 2013, 80 per cent of global trade was attributed to GVCs coordinated through transnational corporations.<sup>1</sup> These corporations carry out trade activities within their extended networks of affiliate partners and suppliers, based on various types of governance schemes, ranging from direct ownership of affiliates to contractual relationships to arm's length transactions. The role of transport and trade logistics in enabling such connectivity between the production hubs and spokes is crucial.
4. The value distribution across industrial supply chains is not homogenous: tasks associated with the highest value creation are concentrated in the pre- and post-manufacturing stages, typically based on service-loaded activities. Fragmentation of production is not homogeneous either: regional value chains (RVCs) are created to consolidate capabilities, and countries tend to import intermediate inputs from other countries in their region, which reflects the high sensitivity of production networks to time constraints, and trade and transportation costs.
5. The Arab region has geographic and demographic advantages that can be utilized to increase its participation to GVCs, through the creation of RVCs in various industries. Its proximity to major production hubs in Asia and Europe and the existence of legal frameworks related to economic groupings such as the Greater Arab Free Trade Area (GAFTA), the Gulf Cooperation Council (GCC) and the Agadir Agreement, can facilitate such participation. However, transport infrastructure and services are not at the level required to enable the region's connectivity to global production competitively.
6. This report assesses the efficiency of transport infrastructure and services for economic transformation in the Arab region, and their suitability in enabling connectivity to GVCs, based on available international indicators.

### I. THE ECONOMIC IMPACT OF GLOBAL VALUE CHAINS

7. Global production sharing has enabled countries to specialize in different parts of the production process, depending on their comparative advantage and other inherent economic features. However, as New Trade Theory has underlined, network effects and economies of scale play an increasing role in trade patterns, illustrated by the concurrence of the information and communications revolution that occurred between 1980 and 1990 and the surge in the internationalization of value chains after significant tariff reductions resulting from trade liberalization and lower transport and communications costs. This explains the adoption of such production patterns at the global level to benefit from specialization and significant economies of scale.

---

<sup>1</sup> United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2013 – Global Value Chains: Investment and Trade for Development* (New York and Geneva), p. x.

8. Trade in intermediates accounted for more than 60 per cent of the total increase in global manufacturing exports from 1990 to 2010, with the share of developing countries in global network trade increasing from 18.5 per cent to 47.3 per cent.<sup>2</sup>

9. Participation in networks of trade in intermediates is associated with job creation and income generation. It provides means for countries to develop their productive capacities, achieve productivity gains, and upgrade and diversify their industries. It also helps to deepen regional integration. Nevertheless, such participation is not automatic. Countries should engage in decision-making processes with regard to their position in a specific supply chain, based on considerations including their natural endowments, trade profiles and industrial capabilities.

## II. THE ROLE OF TRANSPORT IN IMPROVING CONNECTIVITY TO GLOBAL VALUE CHAINS

10. Today, about 70 per cent of world trade in goods and services is related to GVCs.<sup>3</sup> Various services, including transport and financial, telecommunication and distribution services, are essential to connect trade participants along the value chain. Services are enabler of goods and their contribution to the facilitation of GVC operations should be optimized.

11. Three categories of services support manufacturing activities: (a) transport and warehousing; (b) insurance and banking; and (c) research, development and advertising. Services' contribution to global GDP increased from 61 per cent in 1995 to 70 per cent in 2013.<sup>4</sup>

12. Transport provides physical access to markets and production networks, determining countries' level of participation in international trade. The various modes of transport, namely road, rail, sea and air transport, are important; the choice being determined by factors including type of goods, distance, time, available transport infrastructures and services, technology and cost. Reliable transportation networks and logistics capabilities allow countries to expand their global trade and attract foreign investment, particularly in the context of rising importance of GVCs in international trade.

13. The emergence of GVCs is linked to the development of transport services, containerization, increased vessels size, increased air cargo capacities and drops in transport cost. For trade within GVCs of parts and components that are more time sensitive than final products, reliability of transport is fundamental. Countries that invest in their transport infrastructure outperform that neglect that aspect.

14. With global tariffs on imports rapidly decreasing due to trade liberalization, transport costs have acquired a significant impact on the structure of economic activities and on international trade. According to estimates, raising transport costs by 10 per cent reduces trade volumes by more than 20 per cent, and the general quality of transport infrastructure accounts for half of the variation in transport costs.<sup>5</sup>

15. Transport is thus a game changer in GVCs. Its cost is determined by various elements, including distance, nature of goods, transport mode, quality of infrastructure, technology, time, fuel costs and connectivity to international transport networks.

---

<sup>2</sup> Prema-chandra Athukorala and Shahbaz Nasir, "Global production sharing and south-south trade", Background paper No. RVC-1 prepared for the United Nations Conference on Trade and Development, April 2012. Available from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.475.6414&rep=rep1&type=pdf>.

<sup>3</sup> Daria Taglioni and Deborah Winkler, *Making Global Value Chains Work for Development* (Washington, D.C., International Bank for Reconstruction and Development/The World Bank, 2016).

<sup>4</sup> Akrur Barua, David Gruner and Sunandan Bandyopadhyay, "Global value chains: more a development strategy than a mere process", *Global Economic Outlook*, Q4 2015. Available from <https://dupress.deloitte.com/dup-us-en/economy/global-economic-outlook/2015/q4-global-value-chains.html>.

<sup>5</sup> Jean-Paul Rodrigue and Theo Notteboom, Transport costs, in *The Geography of Transport Systems*, Jean-Paul Rodrigue, Claude Comtois and Brian Slack, eds. (New York, Routledge). Available from <https://people.hofstra.edu/geotrans/eng/ch7en/conc7en/ch7c3en.html>.

16. Freight costs have halved since the mid-1970s, driven by investments in infrastructure and technological development. Air transport costs have decreased sharply compared with those of maritime transport, which led to increased use of the first means for various types of goods, especially across oceans such as the Atlantic.

17. Decreasing communications and transport costs have both been instrumental in fragmenting production processes and outsourcing the production of intermediate goods. Speed and dynamism are essential. According to estimates,<sup>6</sup> a distance of one day of ocean travel reduces the probability of manufactured goods being sourced by 1 per cent. Exporting firms are willing to pay 1 per cent of the goods' value per day to avoid time losses associated with maritime transport.

18. Competitiveness of the air transport market, through open skies agreements for example, reduces transport costs by 9 per cent. Transport fares between the United States of America and European Union countries have decreased by 15 per cent after the adoption of an open skies agreement between the two parties. The share of imports arriving by air has increased by 7 per cent three years after an open skies agreement had been signed. This underlines the positive relationship between liberalization of air trade and the volume of traffic.<sup>7</sup>

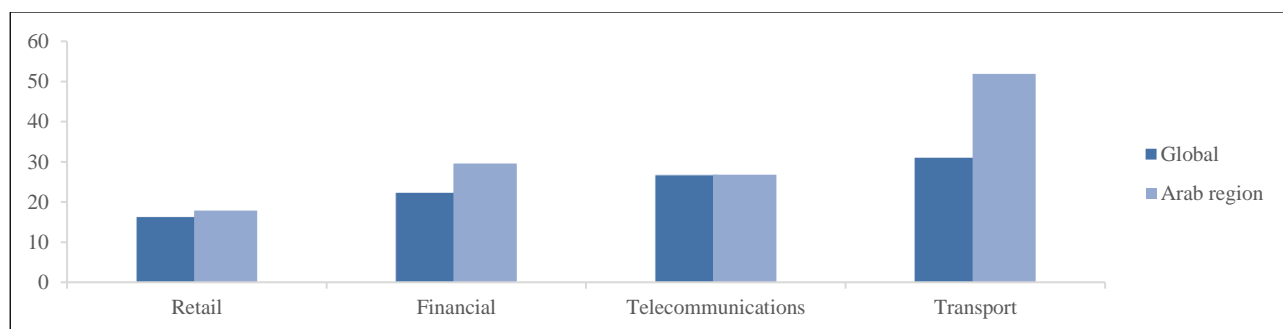
### III. TRANSPORT AND CONNECTIVITY TO GLOBAL VALUE CHAINS IN ARAB COUNTRIES

#### A. TRANSPORT REGULATIONS

19. The Arab region maintains a high level of restrictions on transport sectors. It scored 52/100 in the Service Trade Restrictiveness Index 2015, compared with a global average of 31. The transport sector remains one of the most restricted in the region (figure 1).

20. Arab States have also shown a low level of commitment within the World Trade Organization (WTO), with an average number of commitments in the services sector as low as 1.4, compared with a global average of 2.2. The regional score is driven by commitments made by a few States only, as many have made no commitments at all (figure 2).

**Figure 1. Services Trade Restrictiveness Index by sector, Arab region and global averages, 2008-2011**



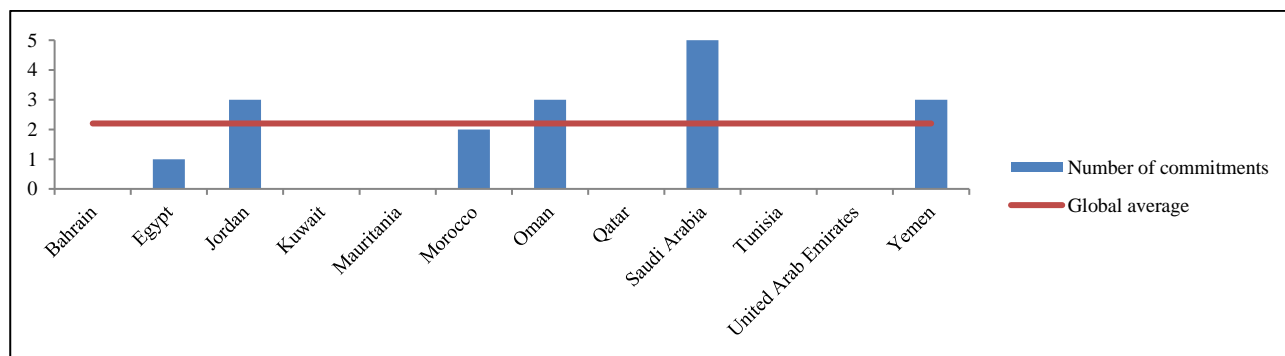
*Source:* Data are from the Organization for Economic Co-operation and Development (OECD), available from <http://www.oecd.org/tad/services-trade/services-trade-restrictiveness-index.htm> (accessed September 2016).

*Notes:* Arab countries for which data are available are Algeria, Egypt, Jordan, Lebanon, Morocco, Tunisia and Yemen.

<sup>6</sup> See [http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327525347307/8392086-1327528510568/WDR09\\_12\\_Ch06web.pdf](http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327525347307/8392086-1327528510568/WDR09_12_Ch06web.pdf).

<sup>7</sup> Clifford Winston and Jia Yan, "Open skies: estimating travelers' benefits from free trade in airline services", *American Economic Journal*, vol. 2, No. 2 (May 2015).

**Figure 2. Transport commitments within the WTO**



Source: 2015 data from the WTO.

## B. TRANSPORT INFRASTRUCTURE

21. The role of transport infrastructure in fostering trade is clear. It was estimated that an improvement of 1 per cent in the infrastructure component of the Logistics Performance Index (LPI) was linked to an increase of 4 per cent in value chain connectivity. Similarly, a 1 per cent improvement in trade facilitation was associated with a 1.5 per cent improvement in connectivity.<sup>8</sup> A 10 per cent improvement in the quality of transport and trade infrastructure was associated with a 30 per cent increase in developing countries' agricultural exports.<sup>9</sup>

**TABLE 1. RANKING OF ARAB COUNTRIES IN THE LPI AND THE KIEL INDEX**

	Kiel Index, 2010	LPI, 2016
Bahrain	27	48
Egypt	48	50
Iraq	97	153
Jordan	45	62
Kuwait	50	56
Lebanon	54	74
Libya	53	142
Mauritania	125	157
Morocco	121	90
Oman	71	34
Qatar	37	28
Saudi Arabia	102	40
Sudan	64	126
Syrian Arab Republic	111	160
Tunisia	85	93
United Arab Emirates	28	13
Yemen	62	Data unavailable

Source: For the Kiel Index: Julian Donaubaer, Birgit Meyer and Peter Nunnenkamp, "A new global index of infrastructure: construction, rankings and applications", Kiel Working Paper, No. 1929 (Kiel, Kiel Institute for the World Economy, June 2014); and for the LPI: World Bank, *Connecting to Compete 2016: Trade Logistics in the Global Economy* (Washington, D.C., 2016).

Note: The Kiel Index covered 165 countries, while the LPI Index covered 159 countries.

<sup>8</sup> Ben Shepherd, "Infrastructure, trade facilitation and network connectivity in sub-Saharan Africa", Background research paper prepared for the Overseas Development Institute, December 2015. Available from [www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/10149.pdf](http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/10149.pdf).

<sup>9</sup> Ben Shepherd, *Aid for Trade and Value Chains in Transport and Logistics* (World Trade Organization and OECD, 2013). Available from [www.oecd.org/dac/aft/AidforTrade\\_SectorStudy\\_Transport.pdf](http://www.oecd.org/dac/aft/AidforTrade_SectorStudy_Transport.pdf).

22. It was also established that improving infrastructure in neighbouring countries can have positive effects: when replacing a country's infrastructure score in the LPI with that of its three closest neighbours, an improvement of 1 per cent in the mean LPI for neighbouring countries resulted in a 5 per cent increase in connectivity for that country. A 1 per cent increase in trade facilitation in the three closest neighbours resulted in a 1.8 per cent increase in connectivity in the country. These findings emphasize the importance of infrastructure investments and trade facilitation measures at the regional level.

### C. CONNECTIVITY TO INTERNATIONAL TRANSPORT NETWORKS

#### 1. Air transport

23. A strong positive relationship was found between exports of parts and components and scores in the Air Connectivity Index (ACI). Parts and components represented a higher share of total exports in countries that were better connected with the international air transport network.<sup>10</sup>

24. The scores of Arab countries in the ACI vary (table 2). Much development has occurred in the past 10 years that was not captured by the index; yet, progress was limited to a few countries, mainly of the Gulf Cooperation Council.

TABLE 2. SCORES OF ARAB COUNTRIES IN THE ACI, 2007

Country	Score ( <i>Percentage</i> )
Bahrain	4.42
Egypt	4.29
Iraq	3.99
Jordan	4.44
Kuwait	4.14
Lebanon	4.63
Libya	5.07
Mauritania	2.13
Morocco	5.27
Oman	3.76
Qatar	4.50
Saudi Arabia	4.00
Sudan	2.44
Syrian Arab Republic	4.54
Tunisia	6.61
United Arab Emirates	4.77
Yemen	2.65

*Source:* Jean-François Arvis and Ben Shepherd, "Measuring integration in the global air transport network", Policy Research Working Paper, No. 5722 (Washington, D.C., The World Bank, 2011). Available from <http://documents.worldbank.org/curated/en/859151468161649899/pdf/WPS5722.pdf>.

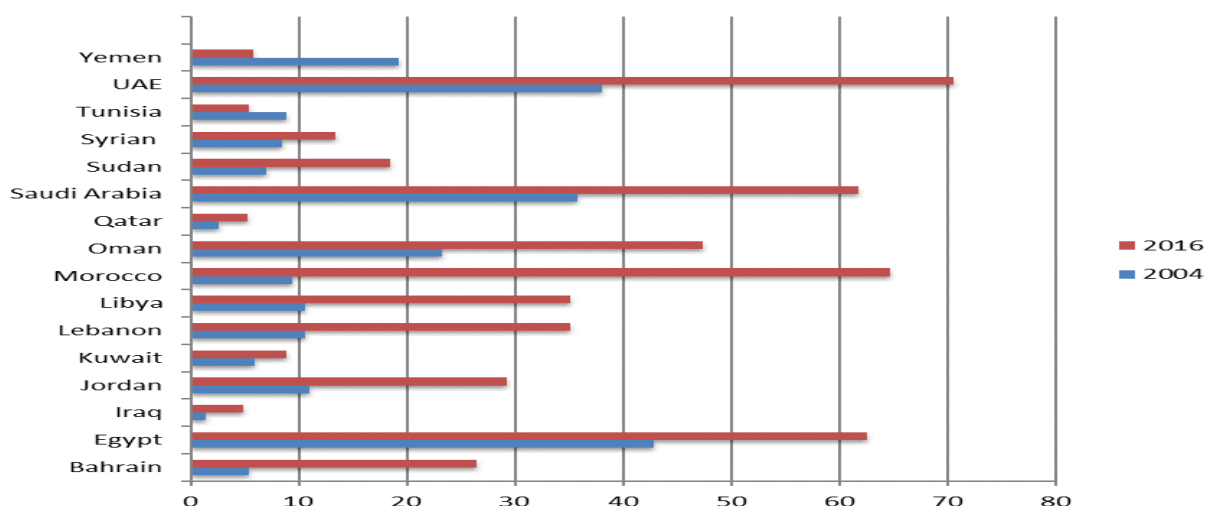
<sup>10</sup> Jean-François Arvis and Ben Shepherd, "Measuring integration in the global air transport network".

## 2. Maritime transport

25. Despite the high growth of air cargo in recent years, attributed to a price drop and an improvement of air carriers, sea transport still accounts for about 70 per cent of internationally traded goods.

26. Notwithstanding its strategic location and high dependence on trade of natural resources, the Arab region's connectivity to global shipping networks is moderate, as illustrated by countries' scores in the Liner Shipping Connectivity Index (LCSI) (figure 3).

**Figure 3. Scores of Arab countries in the LCSI, 2004 and 2016**



Source: Data from the UNCTAD LSCI database. Available from [unctadstat.unctad.org](http://unctadstat.unctad.org) (accessed September 2016).

27. Arab countries performance in transport services varies greatly from one country to another but overall most Arab countries perform modestly in the quality and availability of transport services indicators (table 3).

**TABLE 3. AVAILABILITY AND QUALITY OF TRANSPORT SERVICES IN THE ARAB REGION**

Country	Rank	Score (1-7) <sup>a</sup>
Bahrain	46	4.5
Egypt	72	4
Jordan	62	4.2
Kuwait	75	3.9
Lebanon	95	3.6
Libya	137	2.8
Mauritania	136	2.8
Morocco	53	4.3
Oman	56	4.3
Qatar	22	5.3
Saudi Arabia	44	4.5
Tunisia	80	3.9
United Arab Emirates	27	5.1
Yemen	124	3.2
Arab region average	Non-available	4.03

Source: 2014 data from the World Economic Forum Global Competitiveness Index. Available from [www.weforum.org](http://www.weforum.org) (accessed September 2016).

<sup>a</sup> 1 = very poor, 7 = excellent.



28. The low maritime connectivity of Arab countries can be attributed to various elements, including the low trade volume of the region, which accounts for less than 4 per cent of global trade, and the low quality of infrastructure and services in most of its ports. There is little motivation for opening direct new shipping lines from and to the region with major industrial regions.

29. Availability of transport infrastructure is an important element, albeit not a guarantee, of a well-functioning transport system. Transport efficiency, which can be measured in many different ways based on speed, accessibility, cost, etc., is also key. Fuel prices, competition in the transport market and innovation are also major determinants of the efficiency of transport.

#### **IV. TRANSPORT IN THE TRADE IN VALUE ADDED DATABASE**

30. An important feature of international production sharing is the fact that components and intermediate goods tend to cross national borders multiple times during the production process. Even nominal differences in transport and logistics costs can translate into sizeable differences and hence have an important bearing on competitiveness. This is analogous to the magnifying effects of tariff barriers in vertically specialized production networks. Consequences are particularly severe for downstream firms that incur transportation and logistics costs, both on imported inputs as products are processed along the value chain and on exports of final goods. The compounded effects of transportation and storage costs become larger depending on the number of production stages and the length of the value chain. High transport and storage costs constitute an important barrier not only to foreign suppliers and international investors, but also to domestic producers, whose competitiveness is undermined by higher input costs and constrained supply chains, which weigh on demand, production and investment at all stages of the GVCs.

31. Although GVCs are often coordinated by multinational enterprises, which dominate the cross-border trade of intermediate and final goods, domestic suppliers, notably small and medium enterprises, play a growing role in the production of goods and services that ultimately reach foreign consumers. As greater shares of income are generated through the integration of GVCs in domestic economies, greater shares of total employment are sustained by such activity around the world.

32. The Trade in Value Added (TiVA) database of the Organisation for Economic Co-operation and Development (OECD), developed jointly with the WTO, gives an accurate and detailed picture of countries' integration into global and regional production networks by providing estimates of trade flows in terms of value added. As opposed to trade flows in gross terms, trade in terms of value added better captures the role of international trade in income and output creation, in a world where the activities of firms take place in ever more specialized domains.

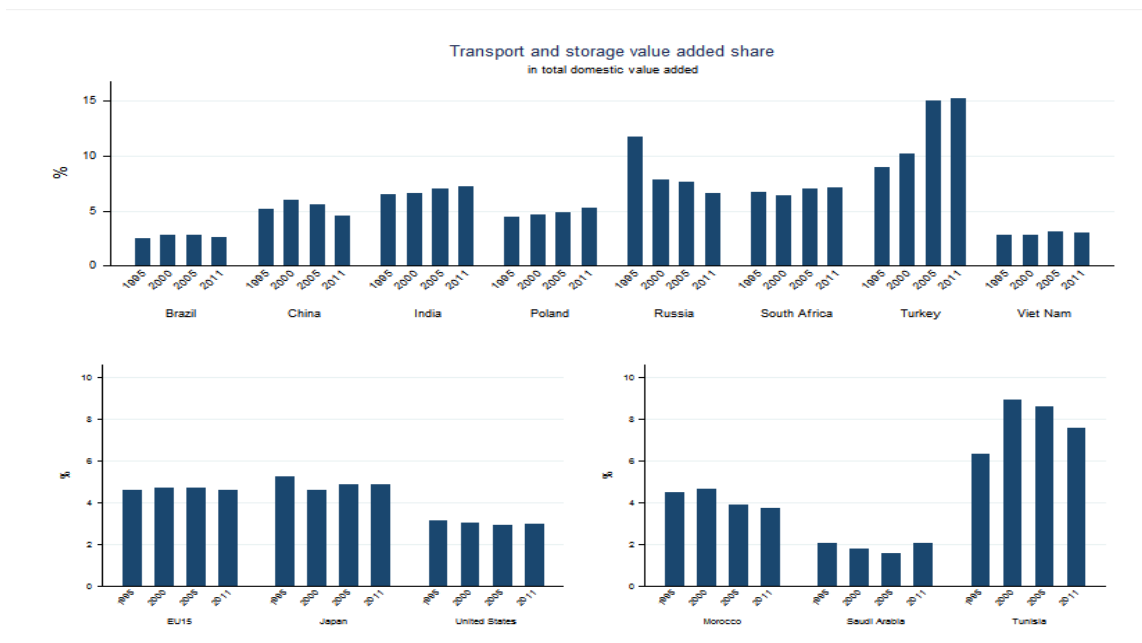
33. It is interesting to assess the extent to which transport services contribute to GVC integration across a heterogeneous set of countries, and how the sector's contribution has evolved over time. The TiVA database enables tracking of the share of transport and storage services exports, as opposed to transport services alone in the absence of a higher level of disaggregation, in total exports in both gross and value-added terms. The database covers several developed and developing countries, including three Arab countries: Morocco, Saudi Arabia and Tunisia.

34. Several results emerge from a detailed analysis of TiVA data (figures 4 and 5). Transport and storage services tend to have a larger share in total output in developing economies than in more developed ones. Their contribution to total exports is higher compared with their share in total output, and varies to a lesser extent, particularly among advanced economies. The output share of the transport and storage sector in the three Arab countries is diverse, with Tunisia displaying more similarities with other developing economies and Saudi Arabia's reliance on natural resources appearing in a very low share of the sector.

35. With the exception of India and Turkey, the selected developing economies have low shares of value added in gross total exports originating from the transport and storage sector, despite the higher shares in output. In Tunisia and Morocco, the value added by the transport and storage sector in gross exports is closer to that registered in advanced economies.

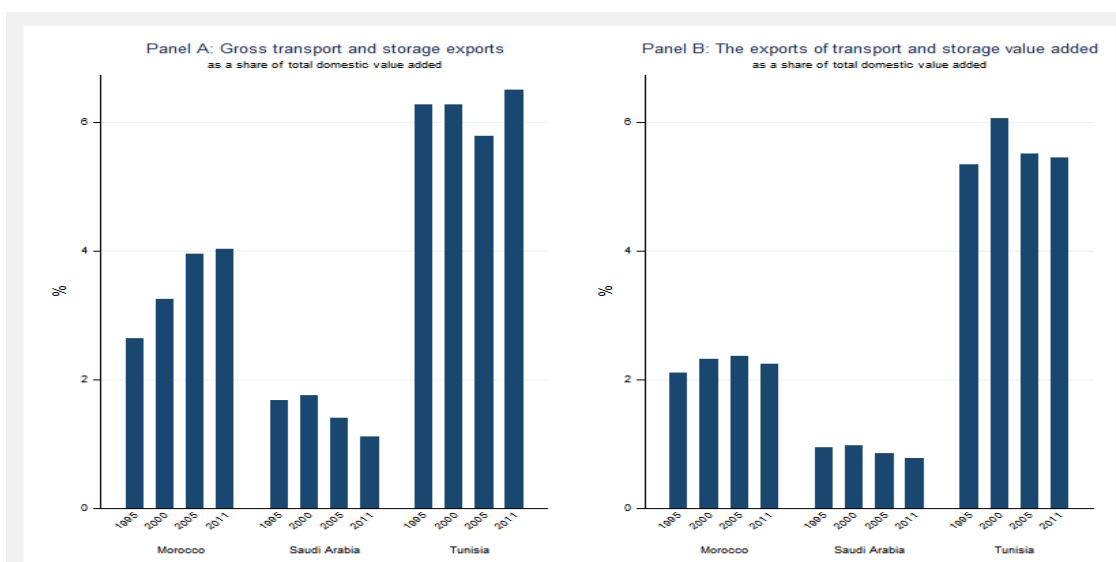
36. The share of value added in gross exports originating from foreign transport and storage services is generally higher in developing economies than in developed ones, especially in Asian economies such as India and Viet Nam. Among Arab countries, Morocco appears to have a relatively high and increasing share of value added in gross exports originating from foreign transport and storage services.

**Figure 4. Share of transport and storage value added in total domestic value added**



Source: Calculations of Economic and Social Commission for Western Asia (ESCWA) staff based on data from the OECD-WTO TiVA database, December 2016 release. Available from [www.oecd.org/sti/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm](http://www.oecd.org/sti/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm) (accessed 1 September 2017).

**Figure 5. Gross transport and storage exports as a share of total domestic value added (A) and exports of transport and storage value added as a share of total domestic value added (B)**



Source: ESCWA staff calculations based on data from the OECD-WTO TiVA database, December 2016 release. Available from [www.oecd.org/sti/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm](http://www.oecd.org/sti/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm) (accessed 1 September 2017).

37. In order to further gauge the impact of the transport and storage sector, it is possible to trace its added value in the exports of partner countries. The analysis of TiVA data gives some indication on the countries involved in GVCs. For instance, the contribution of the transport and storage sector in developed economies is greatest in the exports of other developed economies, suggesting that production sharing takes place mostly among developed countries. Developing countries that appear to engage in GVCs are China, Russia, Poland and, to a lesser extent, South Africa. Among Arab countries, the Tunisian economy is closely linked to that of the European Union (EU-15), as around 7 per cent of the output of the Tunisian transport and storage sector is featured in the exports of the European Union. Morocco's production sharing with the European appears to be limited.

## V. CONCLUSIONS AND POLICY RECOMMENDATIONS

38. As shown by the data presented in this document, the Arab region needs to improve its transport infrastructure and services to increase its participation in GVCs and its exports, and acquire modern technologies, skills and technical knowledge, which all contribute to sustainable economic and social development. In the long term, just as developed countries participating in GVCs look to benefit from the reduced costs induced by the potential of higher labour productivity in Arab countries, the latter should also seek to import production technologies from their more advanced partners in an attempt to abridge the catch-up process. Arab countries should also upgrade their transportation capabilities in order to further partake in international production networks.

39. Some Arab countries are doing better than others, but most should revisit their transport strategies and regulations to attract investments in the transport and logistics sector, and in other economic sectors such as manufacturing and agriculture.

40. The improvement of logistics and transport channels does not necessarily require huge investment: it is mostly a re-engineering of process and procedures that can make a big difference in terms of efficiency. This also applies to customs and other trade-related services, which can greatly benefit from trade facilitation in the context of the Trade Facilitation Agreement of the WTO.

41. Tackling transport infrastructure to promote exports is a prerequisite for any effective development strategy in the Arab region. Building regional transport networks is the second means to promote exports, attract foreign direct investments and create jobs. For example, the transport strategy and policies of the European Union contributed to the development of an efficient, safe and sustainable transport sector based on competitive rules. In the Arab region, regional and subregional organizations, such as the League of Arab States, the GCC and the Arab Maghreb Union have a key role in the design and implementation of such a strategy to establish a regional transport network able to close the gaps between national transport networks and remove the bottlenecks that still negatively affect the functioning of the GAFTA. Moving towards the Arab Customs Union represents an excellent opportunity for the region to reform its transport policies and enhance connectivity among Arab countries on the one hand, and between them and the rest of the world on the other hand.

42. Engagement in GVCs should be complemented by policies that ensure decent working conditions for men and women. Working time, remuneration and employment relationships should reflect States' commitments to international human and workers' rights treaties. Governments should address gender bias issues through capacity-building, training and support initiatives that target women working in firms that participate in GVCs. Labour standards and equality in wages have to be enforced in developing countries, in particular in Arab countries.<sup>11</sup>

---

<sup>11</sup> Penny Bamber, and Cornelia Staritz, "The gender dimensions of global value chains", Issue Paper (Geneva, International Centre for Trade and Sustainable Development, September 2016).

#### FURTHER RESEARCH ON GVCs

43. An area where Governments can help to promote the development of efficient transport infrastructure and services for better connectivity to GVCs is research on the formation, processes and consequences of these GVCs. In this respect, ESCWA, as a member of the OECD Initiative for Policy Dialogue on Global Value Chains, Production Transformation and Development, will continue supporting its member States through the promotion of knowledge-sharing between developed and developing economies to identify good practices and support the implementation of globally beneficial strategies, while giving due consideration to each country's priorities and development vision.

44. Research in the area of GVCs is already advanced, as demonstrated by the TiVA initiative. Work is planned to increase the database's coverage of Arab countries and improve its timeliness and detailed treatment of industries. However, more analysis is required on other important areas directly linked to the Sustainable Development Goals, such as the impact of higher GVCs connectivity on the number and gender of workers, and the sectoral, environmental and economic impacts of GVCs.

45. Finally, integration in GVCs has multiple effects on a country's economic structure, its employment pattern, its distributional characteristics, its overall growth performance and the environment. A full understanding and complete tracing of all such effects is obviously beyond the scope of a single research project. Thus, the identification of the conditions under which a certain type of connectivity to GVCs is conducive to reducing pollution of water, air, and soil while enhancing growth is key. Focus on the distributional effects of GVCs and their environmental damages require a system-wide, general equilibrium perspective. Such a perspective would allow simulating policies that are not yet implemented, for example a new trade agreement or a new green tax policy. It would help decision makers to make informed choices and formulate evidence-based policies that target sustainable development.

-----